From: Paul W [mailto:peedublyou@gmail.com]
Sent: Thursday, September 27, 2012 10:13 PM
To: Pinto_de_Bader, Sandra
Subject: Urban Forest Plan update

Dear Ms. Pinto de Bader,

Regarding the Urban Forest Management Plan Update 2012:

Thank you for the opportunity to comment on the update. As a resident of Seattle and an urban forest professional, I am offering these comments in support of participatory democracy. I regret not offering comment on the 2007 plan but I was a new dad at the time.

I find that the plan may be overly ambitious and optimistic because of two broad areas that are not addressed, as well as several significant details regarding canopy goals. I hope to outline them here. I have not done comprehensive research or analysis to contribute these elements to the plan. That will need to be done by the responsible staff.

The most critical element missing from the plan is the key nature of soils for urban trees. In my opinion, this is a topic that is not well represented in much of the urban forestry profession, so I do not fault the professional quality of the plan. However, if we aspire to have the plan be closely reflective of the real challenges we face, I cannot emphasize enough the crucial nature of this plan element. In the plan, this would appear in Section 2.1 The Urban Forest Resource, and inform subsequent sections of the plan. For example, it should be a high level "Challenges and Opportunities" in Section 4.

Soils are the foundation of the urban forest. Yet they are also the limiting factor. They are poorly understood, in short supply, and generally are in degraded condition. The plan pivots around canopy goals, but no effort is made to analyze

whether there is adequate soil conditions to achieve the canopy goals. Furthermore, I believe it is erroneous to treat soils as an infrastructure component that can be easily manipulated. Soils that are adequate for tree growth are not commodities. They themselves are living ecosystems that must be grown, care for and restored so they can function adequately. Consider the following situations to illustrate my point:

Street trees underperform both in size and longevity because of inadequate soil volume and quality. Desirable small trees with controlled growth patterns often decline and die prematurely because they do not have the vigor to grown in urban soil conditions. Larger, more vigorous trees perform better but then create all kinds of infrastructure problems because the surrounding hardscape was not designed to handle the large root volume they require. SDOT is just beginning to address this issue with demonstration projects using structural soils and suspended pavement. I think much more research and investment is needed in this area to make street trees achieve the canopy goals the plan puts forth. Some of this is included in the plan, but I think a more robust analysis of the soils component would elevate this need in the plan.

The plan recognizes that private property trees have the greatest potential for increasing urban forest canopy. And the reason is soils. Single family residential property is where most of the intact soils still reside. After discussing the current and proposed tree regulations with a DPD planner at the open house, I was more assured that the role of soils is at least being considered in development regulations. However, it is still treated as exchangeable element that can be manipulated as a commodity. Furthermore, I did not see that there is a solid analysis of how tree regulations on single family lots allow for adequate soil volume and quality to support the trees that are being required or encouraged. Part of the problem is that tree roots do not follow property lines. Tree regulations and goals implicitly assume that the soil volume is a common resource. I can plant a tree in my yard, and the roots will take advantage of my neighbor's soil. What if my neighbor's redevelopment reduces my tree's soil volume? My tree declines over the long term, but no relationship is made between the two events. I do not have a good solution for this quandary other than to say that the canopy goal for residential property may be overly ambitious given the density that current development code allows. This question definitely needs more research an analysis. Another discrepancy in this area is the overselling of trees as stormwater

management tools. They definitely play a role, but that role is fairly minor compared to the huge role that intact, healthy soils can play in providing storage and buffering of stormwater.

Even forest soils have been degraded by urban processes. The work of Klinka, Krajina and Ceska on the ecology of native forest species makes a strong case that particular species depend on particular biological soil associations. Many of the forest species that we value depend on a high-humus, lignin rich soil. But urban processes have changed these soil characteristics markedly. Historical logging events, the introduction of exotic earthworms, erosion and other urban impacts have altered the soil composition. Where you might expect to find a foot or more of duff in an intact forest, you rarely find more than 2-4 inches of duff in Seattle. This has serious implications for what we can expect from urban forest restoration. I suspect the influence of certain root diseases is exacerbated by this loss of soil ecological function. I do not believe that the goal of a predominantly conifer canopy is realistic without addressing this issue first. Furthermore, the occurrence of landslides, root disease and windthrow are increased by urban influences. Therefore, I think the goal of 80% canopy in natural areas is unrealistic. These influences create more patchiness in the urban forest than would be found in an intact forest.

My second area of broad concern has to do with the nature of a multicultural society. In my 22 years as an urban forestry professional, I have dealt with the spectrum of opinion about trees, from the tree lover to the tree hater. While there are many benefits that trees provide, some are subjective. Trees are valued more in some cultures than in others. The plan does not attempt to address this difference. I have talked to immigrant families who are very afraid of trees because in their native land, there are no big trees. Multiculturalism also involves more than ethnic background. Class, education, and other influences make culture a very complex landscape. I have concluded that trees are part of what I call "place-based" culture. They signify rootedness and commitment to a place. This quality is highly desirable for a democratic society. However, my place-based culture looks different than the guy who has a view of Elliott Bay. He may feel just as rooted as I do, but his rooting is enhanced by his attachment to the view he has. I contrast this with affiliation-based culture, which is based on people feeling attached to groups of people with similar interests or beliefs. That form of culture has blossomed in our current society and is making it hard for us to remain a cohesive

democracy. I think for the sake of democracy and the environment, we need to find ways to support place-based culture to balance the excessive influence of affiliation-based culture. I would like the plan to take somewhat of a broader view on trees and not assume that everyone should think that trees are as important as we do. Trees are a part of a larger picture. Acknowledging this in the plan would give it greater credibility and include tree skeptics in the picture. I think the topic of Views in Section 4 needs some work in this regard. And while the action items to inspire and inform community stewardship are important, there may be other work to train tree advocates in cultural diversity and conflict resolution.

I hope these comments are useful and constructive.

Paul West

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